

REMARKS

Applicants thank the Examiner for the careful review of the remarks filed on June 16, 2003. Applicants note that claims 1-23 are pending and the Examiner rejected claims 1-16 and 18-23 under 35 U.S.C. § 103(a). The status of claim 17 is unknown based on 5 papers numbered 5 and 7. Accordingly, Applicants respectfully request a response regarding claim 17. Claims 1-23 remain pending.

Claim Rejections Under 35 U.S.C. § 103(a)

The Examiner rejected claims 1-16 under 35 U.S.C. § 103(a) as being unpatentable 10 over Moslehi et al. (U.S. Pat. No. 5,217559) in view of Notman (U.S. Pat. No. 4,311,671). Further, the Examiner rejected claims 18-23 under 35 U.S.C. § 103(a) as being unpatentable over Moslehi et al. and Notman in view of Rudolph et al. (U.S. Pat. No. 5,480,678). Applicants respectfully traverse.

As noted by the Examiner on page 3 (paper #7, viii.) “Moslehi then does not teach 15 the plurality of holes are misaligned defining a nonlinear path for fluids. Moslehi does not teach that the posterior gas mixing undergoes turbulent mixing.” Subsequently, the Examiner combined Notman with Moslehi et al. and stated that it would have been obvious to “shift (move) one or more of Moleshi’s baffle plates horizontally such that each of the plurality of holes are misaligned (page 4, paper #7).”

20 Notman discloses two types of pipes. One type is a catalyst emptying pipe 36, 36A, 36B, 36C (col. 7, lines 22-31, FIG. 1, FIG. 5), which *discharges gas externally* through port 38. The second type is a by-pass pipe 52, 53, 54, 56 (col. 9, lines 18-39, FIG. 5), which permit gases to *bypass* different beds of a reactor. Thus, one of ordinary skill

would be taught by Notman that gases can flow from two different pipes on a grid level for two different purposes.

One of ordinary skill in the art would also notice that each type of pipe disclosed in Notman has a different orientation. The emptying pipes are oriented in a line *on each grid level*. However, bypass pipes are *not oriented on each grid* (FIG. 5, 16A has an emptying pipe, not a bypass pipe). Moreover, upon closer inspection of the bypass pipes, Notman teaches that if there is a bypass pipe, the bypass pipe is only allotted one per grid. Subsequently, one of ordinary skill in the art would be motivated by Notman to place one pipe *on some grids* to mix gas and a second pipe per grid to externally discharge gas from a reactor.

In contrast, independent claim 1 recites that the *plurality of holes in each of the baffle plates* are *misaligned*. Because the plurality of holes are misaligned, the nonlinear path for fluids *traverse each level of the multilevel structure* defined by the plurality of baffle plates and *leave the exit port* of the housing. Moslehi et al. and Notman would not suggest nor motivate to one of ordinary skill in the art to *misalign all the holes on each level* to eventually *leave the housing at one exit port*. Similarly, independent claim 12 recites an input port and an output port being aligned with each other, but *misaligned with each of the plurality of orifices*.

Regarding the Examiner's suggestion that one or more of the quartz plates 130, 20 132, 134 taught by Moslehi et al. can be shifted or moved to produce the misalignment, Notman teaches that that the reactor is preferably fabricated by welding and forging (col. 3, lines 18-40). Because the reactor components are welded or forged, one of ordinary skill in the art would not be motivated to fabricate the quartz plates in a similar manner. Thus, one of ordinary skill would not misalign the quartz plates.

Because both Moslehi et al. and Notman individually and in combination do not disclose or suggest the elements recited in independent claims 1 and 12, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection. Further, because dependent claims 2-11 and 13-17 depend from independent claims 1 and 12, the 5 dependent claims are submitted to be allowable for the same reasons. Subsequently, because Notman cannot be combined with Moslehi et al., Rudolph et al. cannot be combined with the references to reject claims 18-23. Thus, Applicants respectfully request allowance of pending claims 1-23.

Accordingly, Applicants respectfully request a Notice of Allowance based on the 10 foregoing remarks. If the Examiner has any questions concerning the present amendment, the Examiner is kindly requested to contact the undersigned at (408) 749-6900, x 6911. If any other fees are due in connection with filing this amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. NOVEP015). A copy of the transmittal is enclosed for this purpose.

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Respectfully submitted,
MARTINE & PENILLA, LLP

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Feb Cabrasawan
Reg. No. 51,521

25 Martine & Penilla, LLP
710 Lakeway Drive, Suite 170
Sunnyvale, California 94086
Tel: (408) 749-6900
Customer Number 25920

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